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Agricultural.

SHEEP-BREEDERS IN COUNCIL.

Annual Meeting of the Michigan Merino Sheep-Breeders' Association—Import Business Transacted—A Large Attendance Testifies to the Great Interest the Farmers of Michigan Take in Sheep-Breeding and Wool-Growing.

Promptly at 7:30 A.M., on Tuesday last, Hon. John T. Rich, President of the Michigan Merino Sheep-Breeders' Association, called those present in the Senate Chamber of the State Capitol to order, and the business of the meeting began.

The following is a list of those present at the opening session:

John T. Rich, William R. Ball, George E. Evans, Smith, George Coleman, B. F. Carus, S. D. Johnson, W. G. Dean, D. P. Dewey, J. T. Quackenbush, J. B. Moore, J. W. Hamer, W. C. Carter, E. Anderson, Fred C. Wood, D. M. Edwards, A. D. Miller, H. L. Carrier, E. W. Hailey, H. L. Bremfield, President Samuel Johnson, L. W. Barnes, L. W. Hibbert, G. Oberholser, G. D. Hart, A. Oliver, E. W. Kennedy, R. W. Miller, Arthur A. Wood, H. D. Deane, J. Chisholm, J. A. Newell, J. Freeman, E. T. Stone, C. Donaldson, John McKay, T. V. Quackenbush, H. W. Darline, A. McMillan, W. W. Diehl, George VanGiesen.

Secretary E. N. Ball read the programme prepared for the occasion, and then President Rich followed with his annual address,

Gentlemen.—The year which has passed since our last meeting has been a fair one for the Association. We are out of debt, have a balance plus, which is particularly pleasing to the older members who had the struggle to pay the indebtedness, which at one time was extremely burdensome. There are fewer members of the Association as shown by the record, than one year ago, owing principally to the expulsion of members who have persistently refused or neglected to pay their dues. The Association is, however, in a better position as a result of this action, as those who have thus far paid their dues are not likely to drop out, nor will be willing to use every exertion to maintain and improve our organization.

As soon as the finances of the Association warrant such action, steps should be taken for the publication of the second volume of our register. In connection with the pecuniary ability of the Association to publish the second volume, the question arises whether our register is or can be made all that is desirable for a Michigan breeder to have. If any member in the affirmative the question arises, why then should we burden ourselves to have our flocks registered in other registers, as many of us are now doing. As all the standard registers have substantially the same rule for admitting flocks to register, it would be well to have some rule for registering sheep in our register that have been admitted to registered by other associations having the same, or substantially the same standard of admission. If on the other hand, our register is not all that is needed and it is not our duty to make it such, then the question might properly arise whether it is worth while to maintain it at all. There is, however, no doubt but our register is, and can continue to be made, all that which breeders need, and when the second volume is published it should contain all the improvements which experience, and the determinations on the part of men most to excel, can suggest.

The year just past has been, by any means all that could be desired, and has been fairly prosperous for wool interests when compared with other branches of agriculture. The practice of using Shropshire or other long or middle-wooled rams on grade rams has reduced the demand for Merino rams, and those making the change have, by selling the cross-bred lambs for mutton, realized a fair profit from their flocks. But,

as experience has shown that but one cross of this kind is profitable, that in order to succeed you must go back to first principles, it is fair to presume that even this practice will be of short duration. Those who consider the Merino sheep for those of other breeds, with the hope of getting something which will require less care, will be very much disappointed. The Merino sheep are better calculated to be kept in large flocks and live on short pasture and coarse feed than any others. It is not impossible, that, with some changes in our method of breeding, which shall sacrifice nothing in value, that when fleeces, feed and care are taken into consideration, Merino lambs will prove quite a profitable feed for stock, and may be the choice for the Association to offer in a manner fitting the grade, or, if you please, full-blood. Merino lambs, to be sold for the shambles, not to exceed thirteen months of age, which show the largest profit to the breeder, when cost of feed and value of fleece and carcass are taken into consideration. The result might be a surprise to many who have considered the Merino valueless as a feeder, especially as a lamb.

Whatever of prosperity the future may promise to the sheep and wool industry is seriously menaced by the general reduction of the duty on woolens, and the removal of the duty on raw wool. It is hardly probable that this plan can succeed during the present session of Congress, but the agitation of the question involving the uncertainty of the result will prove detrimental to sheep and wool interests.

The annual message of the President of the United States to Congress is devoted entirely to an argument in favor of the reduction of tariff duties. While no other portion of the speech is so weighty as the entire message is devoted to an argument in favor of the removal of the duty on wool. In reference to manufacturers generally he uses the following language:

"Nor can the presentation made of such consideration be, with any degree of fairness, regarded as evidence of unfriendliness toward our manufacturing interest or of any lack of appreciation of the importance of our existence. These interests constitute a leading and most substantial element in our national greatness and furnish the proud proof of our country's progress. But if in the emergency of the present our manufacturers are asked to surrender something for the public good and to avert disaster, their patriotism, as well as a frank recognition of advantages already afforded, should lead them to yield a concession. No demand is made that they shall forgo the benefit of governmental regard; but they cannot fail to be admonished of their duty as well as their enlightened self-interest and safety when they are reminded that the financial panic and depression, to which the present condition tends, affords no greater shelter or protection to our manufacturers than to our important enterprises."

You will note that he is careful to say to the manufacturers that no demand is made that they shall forego all the benefits of government protection, and that the demand is that the expectation is that their business will be injured, but hopes that their patriotism and gratitude for past protection will induce them to co-operate with others in maintaining protective duties.

Referring to the farm, after making a lengthy argument to show that the duty on wool is a damage to the wool-grower and every one else, he uses the following language:

"When the number of farmers engaged in wool-growing is compared with all those in the country, and the small proportion they bear to our population is considered; when it is made apparent that the present tariff on wool is illusory; and, above all, when it must be admitted that the burden of the cost of living caused by such tariff, becomes a burden upon those with moderate means, and the poor, the employed and the unemployed, the sick and well and the young and old; and that the present tariff is a tax on the innocent, grasp is fastened upon the clothing of every man, woman or child in the land, reasons are suggested why the removal or reduction of this duty should be included in the revision of our tariff laws."

In the quotations made above I have given enough to show the argument and connection made. While there is an attempt to mislead the people concerning the plain meaning of the language is, that he does not believe the tariff on wool is of any use to wool-growers, and if it is, their numbers are so small they are not worthy of consideration. There can be but one result should Congress carry out the recommendation of the President in regard to wool. So far as Michigan wool interests are concerned, they will be utterly destroyed. The strong reason for a reduction of the tariff on wool is to reduce the surplus in the U. S. Treasury, but the entire revenue derived from wool for the year ending June 30, 1887, was only \$5,136,108.35, of which \$3,437,048.81 was collected on wool of the first class, and \$2,198,149.20 on wool of the third class, which, in the absence of fraud in entering for appraisal, do not come into competition with wool grown in the United States. Thus, it is shown that no sufficient reduction in the revenue can be had by putting wool on the free list to warrant the destruction of this valuable industry.

The number of sheep in the United States in 1883 was 49,237,000; in 1884, 50,626,000; in 1885, 44,759,000. The percentage of imported wool to the amount consumed was, in 1882, .17%; in 1886, .29%. Thus, it is shown that at present wool is not overprotected, for since the last change in the duty on wool the sheep of the country have been materially reduced, and the percentage of imported wool correspondingly increased. Before the tariff was reduced, it is its duty to make a vigorous protest to Congress against adopting the President's recommendation in regard to wool.

With a view of ascertaining just how Michigan's Senators and Representatives in Congress stand upon this important question, I addressed each of them as follows:

Hon. —Washington, D. C.

DEAR SIR:—In behalf of the Michigan Merino Sheep-Breeders' Association, I desire to ask if you will, by your vote and influence, do what you can to prevent any further reduction of the import duties on wool and woolens. An early reply is respectfully solicited.

Very respectfully yours,

JOHN T. RICH, Pres't.

The replies so far received are as follows:

UNITED STATES SENATE,
WASHINGTON, D. C., Dec. 15th, 1887.

Hon. John T. Rich, President.

MY DEAR SIR:—Yours in behalf of the Michigan Merino Sheep-Breeders' Association, asking whether I will do what I can to prevent any further reduction of the import duty on wool and woolens, is noted. Will you please return to your Association,

for me, an unequivocally affirmative answer. With personal respect and esteem I am, Very truly yours,

T. W. PALMER.

SENATE CHAMBER, WASHINGTON, D. C., Dec. 14th, 1887.

Hon. John T. Rich, President.

MY DEAR SIR:—In reply to your favor of the 12th instant, I would say, you may rely upon my active exertions in endeavoring to reduce the duty upon wool, or any other article where the prosperity of the industry depends upon its protection. We must keep our money at home and maintain at least the present scale of wages paid to our operatives. The policy laid down by the President would close every manufacturer in our country except, perhaps, a few cotton factories in New England, and then where would our grain producers find work? It is to be hoped that the Association will take a more decided stand in favor of a minimum price of Merino lambs, to be sold for the shambles, not to exceed thirteen months of age, which show the largest profit to the breeder, when cost of feed and value of fleece and carcass are taken into consideration. The result might be a surprise to many who have considered the Merino valueless as a feeder, especially as a lamb.

As experience has shown that but one cross of this kind is profitable, that in order to succeed you must go back to first principles,

it is fair to presume that even this practice will be of short duration. Those who consider the Merino sheep for those of other breeds, with the hope of getting something which will require less care, will be very much disappointed. The Merino sheep are better calculated to be kept in large flocks and live on short pasture and coarse feed than any others. It is not impossible, that, with some changes in our method of breeding, which shall sacrifice nothing in value, that when fleeces, feed and care are taken into consideration, Merino lambs will prove quite a profitable feed for stock, and may be the choice for the Association to offer in a manner fitting the grade, or, if you please, full-blood. Merino lambs, to be sold for the shambles, not to exceed thirteen months of age, which show the largest profit to the breeder, when cost of feed and value of fleece and carcass are taken into consideration. The result might be a surprise to many who have considered the Merino valueless as a feeder, especially as a lamb.

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The Horse.

DOCKING HORSES.

European Ideas upon the Subject.

From our Paris Correspondent.

Ought the tails of horses to be docked? The Belgian Agricultural Society is of opinion such should never take place, because it is the fashion or the custom to do so.

Anatomically, the tail is composed of

13 to 15 joints, or vertebrae, covered by four

muscles on each side to allow of the tail's

action as intended by nature; between the

bones is cartilaginous tissue of a certain

thickness, to permit of elasticity and flexi-

bility. It is in this separating interjacent

tissue, not in the bone that the knife

should penetrate whenever docking has to

be performed. Arteries traverse the tail,

thinning in volume as they come near the

extremity, with offshoots. The median

artery is situated in the underside of the

tail; it is from this artery when divided,

that the spurt of blood jerks upwards.

When the tail is shortened by the excision

of two or three joints, the hair is either

allowed to grow its full length, or proportionally

shortened, or left to develop in unequal lengths like a broom. Occasionally

after the tail is docked, the muscles on the

under side are extracted, an operation which

forces the animal to display its tail in the

air by the predominance of the elevating

muscles, the depressing ones having been

removed.

Only in exceptional circumstances can

the shortening of the tail joints be ac-

cepted, in all other cases it is a barbarous

operation. Owing to the advantages of

crossing by Arab and English, etc., etc.,

horses now carry their tails better. The

mutilation is always injurious to the animal,

it makes the horse not only suffer, but

makes it vexed and irritable. Not unfre-

quently gangrene and tetanus set in.

Nothing is handsomer than a horse with its

flowing tail, able to sweep and whisk its

tail quarters and sides. It is too, the best

and the most natural of fly or insect

chasers. In Holland and Scandinavia,

it is not uncommon to dock as a

means to reduce the unsightliness of

defective cruppers. In some parts of

Belgium, it is the custom shortly after the

foal is weaned, for the farrier to arrive and

gullotine its tail, and for no other reason

than it is the custom to amputate a few of

the joints. In dirty weather, the way to

keep the tail clean, as practiced here with

the omnibus and cavalry horses, is to knot

up the tail; just as a man tucks up his

trousers, or a lady lifts her dress. During

the wars of the Low Countries the English

savvy was all but decimated, due to the

stings of flies, and the horses being docked

were unable to whisk away the insects. It

must be a variable Tantalus agony for a

horse when bitten by flies to have to submit;

the tail being too short to last them, and

they being too distant from the mouth also.

Unable to rest quiet, the animal must suffer

in health and temper.

In Switzerland, according to Zandell, there

is a disease known as spontaneous caries of

the tail joints, and which demands extirpation;

it is a malady also peculiar to Alsace,

Germany and Finland. That gangrene is

the consequence of bad or insufficient food,

or uncleanness. In northern Russia it al-

ways follows when horses have to be fed on

moss or lichens; in Alsace it sets in after

spoiled or adulterated rations.

THE FOOT OF THE HORSE.

The anatomy of the foot of the horse is something about which even those who are largely interested in having a correct knowledge of all parts of the animal, are seldom well informed. From this ignorance comes faulty shoeing with all its attendant evils, and the lack of proper care on the part of owners. The following chapter upon the foot of the horse from a high authority will be found both interesting and instructive:

"In viewing the horse's hoof as a whole, and in the unshod state, we find that it presents several salient characteristics, the consideration of which ought to dominate or serve as a guide in framing rules for the observance of farriers in the practice of their art. The first of these is the direction in which the wall grows in a healthy condition.

"Viewed as it stands on a level surface,

the hoof may be said to be somewhat conical in shape, its upper part being a little less than its base; and, although, geometrically, its shape may be described as the frustum of a cone, the base and summit of which have been cut by two oblique planes—the inferior converging abruptly behind toward the superior—yet the circumference of the hoof does not offer that regularity which this description might imply; on the contrary, in a well-formed foot, we find that the outline of its inferior or ground border is notably more worn on the outer than the inner side, giving it that appearance which has been designated the 'spread.'

"A cone being intersected by two planes oblique to its axis, and not parallel to each other, gives a good idea, nevertheless, of the obliquity which forms so marked a feature in the hoof. The degree of obliquity of the front part or toe, and of the upper surface, varies with the amount of growth; but where this has been counterbalanced by a proper degree of wear, it will be remarked that this obliquity corresponds to the inclination of the postern-bones immediately above the hoof, when the horse is standing.

"It will be obvious that this inclination also varies with the breeding of the animal, and the conformation of the limbs; so no definite degree can be assigned. But it must be pointed out, that giving the angle of 45°, as is done in almost every treatise on shoeing and the anatomy of the foot, is a grave error. Looked at in profile, a hoof with this degree of obliquity would at once be pronounced a deformity, and if the farrier were to attempt to bring every foot he shod to this standard, he would inflict serious injury, not only on the foot itself, but also on the back tendons and the joints of the limbs. Careful measurement will prove that the obliquity of the front of the hoof is rarely, if ever, in a well-shaped leg or foot, above 50°, and that it is, in the great majority of cases, nearer 55°. The sides or 'quarters' of the wall are less

inclined—though the outer is generally more so than the inner; while the heels are still more vertical, and the inner may even incline slightly inward. Viewed in profile, the posterior face of the hoof will be observed to have the same degree of slope as the front face. In height, the heels are usually a little more than one-half that of the toe; both heels are equal in height.

"These features, as will be seen hereafter, are sufficiently important to be constantly remembered. The other characteristics are to be found on the lower or ground face of the hoof—the 'most important, so far as the farrier's art is concerned.'

"In a natural condition, the whole, or nearly the whole of this face comes into contact with the ground, each part participating more or less in sustaining the weight thrown upon the limb. On soft or uneven soil, the entire lower border of the wall, the sole, bars, and frog, are subjected to contact; and these sustain the animal's weight, as well as the force of its impelling powers. But on hard or rocky land with a level surface, only the dense, tough crust and bars, the thick portion of the sole surrounded by them, and the elastic, retentive frog, meet the force of the weight and movement; and, in both cases, not only with impunity, but with advantage to the interior of the foot, as well as to the limb. The horn on this face is, as has been said, dense, tough, and springy to a degree varying with the parts of which it is composed; while its fibres are not only admirably disposed to support weight, secure a firm grasp of the ground and aid the movements of the limbs, but are also an excellent medium for modifying concussion or jar to the sensitive and vascular structure in their vicinity.

"The whole circumference of the wall meets the ground, and from the disposition of its fibres, the arrangement of the cells which enter into their composition, and its rigidity, it is admirably fitted to resist wear and sustain pressure. It projects more or less beyond the level of the sole, and the space measured between the white zone within it and its outer surface gives its exact thickness. This is a fact not without interest to the farrier in the operation of attaching the shoe by nails, as these have to be driven only through this dense horn—which in good hoofs cannot be said to much exceed half an inch in thickness—and in proportion to its thinness is the necessity for carefulness and address on his part, in order to guard against wounding or bruising the sensitive textures.

"The sole is more or less concave from its juncture with the wall; nevertheless, even on moderately firm ground, a portion of its circumference, which is generally the thickness of the wall, takes a share in relieving the latter of pressure. This is also a fact not without interest to the farrier in the operation of attaching the shoe by nails, as these have to be driven only through this dense horn—which in good hoofs cannot be said to much exceed half an inch in thickness—and in proportion to its thinness is the necessity for carefulness and address on his part, in order to guard against wounding or bruising the sensitive textures.

"The frog, on both hard and soft ground, is an essential portion of the weight-bearing face. In the unshod, healthy foot it always projects beyond the level of the sole, and seldom below that of the wall at the heels; indeed, it is found, in the majority of hoofs, either on a level with the circumference of this part, or beyond it, so that its contact with the ground is assured. Hence its utility in obviating concussion, supporting the tendons, and, on slippery ground, in preventing falls. In pulling up a horse sharply in the gallop, or in descending a steep hill, the frog, together with the angular recess formed by the bar and wall at the heel of the hoof, are eminently serviceable in checking the tendency to slip; the animal instinctively plants the posterior portions of the foot exclusively of this ground.

"Dark hoofs are generally the best; they owe their color to the presence of minute particles of black pigment, which contains a notable proportion of iron, and are somewhat resistant and indestructible.

"A good hoof should have the wall unbroken, its outer face smooth and even; the angle at the front not less than 50°—the lower or ground face of the front hoof should be nearly circular in outline—the sole slightly concave at the circumference, deeper at the center; the border of the wall ought to be thick at the toe, gradually thinning toward the heels, but at the flexion or commencement of the bar a strong mass of horn should be found; the bars should be free from a fracture, and the frog moderately developed, firm and solid.

"The hind foot should possess the same soundness of horn, though it differs from the fore hoof in being more oval in outline from the toe to the heels; the sole is also more concave, the frog smaller, and heels not so high. The hoof is usually less hard and resisting—a circumstance perhaps due to the hind feet being more frequently exposed to humidity in the stable than the front ones."

Horse Gospel.

A. V. PANTLIND, record 3:20%, a Michigan bred horse by Hamlet, will winter in California.

DISTEMPER is prevailing very extensively in this State, and many stables are suffering from it.

The Turf, Field and Farm figures that there were 448 additions to the 2:30 list last season, including both trotters and pacers.

It is reported that Oliver K. has recovered from his lameness, and will appear on the track next season. Hickok thinks St Julian will also be in shape to appear.

It is announced that Judge Grant, President of the National Trotting Association, and Gen. W. S. Tilton, first Vice President, will retire from those positions at the regular meeting which will be held at Chicago in February. Judge Grant has been President for eight years.

AUSTRALIAN PAIR, by Darenbin, won the Australian Derby, and three days later ran third for the Melbourne Cup. His sire, Darenbin, is owned by J. B. Haggins, of California. The sides or 'quarters' of the wall are less

inclined—though the outer is generally more so than the inner; while the heels are still more vertical, and the inner may even incline slightly inward. Viewed in profile, the posterior face of the hoof will be observed to have the same degree of slope as the front face. In height, the heels are usually a little more than one-half that of the toe; both heels are equal in height.

A GLANCE at the breeding of the "big six" of the five-year-old world reveals the fact that the sires of five of them were developed and had fast records. They are as follows:

Patron, by Pancoast, 2:13½; Stamboul, by Ultan, 2:24; Sir Walter, Jr., by Sir Walter, 2:24½; Roslyn Wilkes, by Conny and Harry Wilkes, 2:24½; Conde, by Abbotford, 2:24½.

THERE was a balance of \$13,011.81 in the treasury of the National Trotting Association on November 1, 1887, exclusive of \$5,193.11 held under protest awaiting the action of the Board of Review. The membership fee for the fifth class has been reduced as follows: For members whose business for the year exceeds \$1,500, and is not over \$2,000, \$25; \$1,000 and not over \$1,500, \$20; \$500 and not over \$1,000, \$15; \$100, \$10.

THE following emphasizes the theory that breed winners you must rely upon those who are producers: The broad mare Elmira, by Henry B. Patchen, foaled 1869 (died September 20, 1885), produced twelve foals by six different stallions, and six of the twelve foals acquired records of better than 2:30, as follows:

Ch. m. Adele Gould, by Jay Gould, 2:19; Ch. m. Kate Taylor, by Aberdeen, 2:23½; Ch. m. Augustine, by Aberdeen, 2:23½; Ch. m. Lucy Prince, by Kentucky Prince, 2:23½; Ch. m. Alice Blackwood, by Blackwood, 2:23½; Ch. m. Ray Gould, by Jay Gould, 2:20.

THE American Cultivator says: "They have a wonderful mare in New Hampshire, if an item concerning one Nelle Grey, which first appeared in a paper in that State, and is now going the rounds is correct. It is claimed that she was bred in Maine, is by a son of imported Messenger, and has herself been bred to Mambrino Wilkes this season. As imported Messenger died eighty years ago next month, and the only one of his sons that ever died in Maine passed in his check forty-four years ago, it would seem that Nelle Gray had an unusually strong grip on the brittle thread of life."

CONSUMPTION Surely Cured.

To the Editor:—

Please inform your readers that I have a positive remedy for the above named disease. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any one of your readers who have confidence in me, if they will send me their Express and P. O. address.

Respectfully,

T. A. SLOCUM, M. C., 181 Pearl St., New York

The Farm

EXCELLENT ADVICE TO BREEDERS OF SHORTHORNS.

The Experience of Amos Crookshank, the Famous Shorthorn Breeder.

The last issue of the Breeders' Gazette contains a letter from Mr. Amos Crookshank, of Sittyton, Scotland, which is worthy of a place in the scrap book of every breeder of Shorthorns. We reprint it entire:

"In reply to your first inquiry will say Shorthorns have been preferred at Sittyton because this breed possesses the power of improving all other kinds of stock. A Shorthorn cross steer will give more beef in a shorter time than any other sort, while the cows give a large quantity of milk of good quality. The Shorthorn will stand a great variety of climate, and can be exported to any part of the world which affords grazing with the certainty that the local varieties of cattle will be enormously improved.

"A new beginner should make up his mind to eschew fashion and make utility his sole aim. He should buy cattle not only good in themselves, but such as are known to have come of good sorts through recent generations. Pedigree is of the utmost value to him; but he must take care to use it rightly. He must guard against attaching fictitious importance to names and reputations which may have been justified by the facts of thirty or forty years ago. He should certainly try and secure the benefit of such a foundation where the recent management has been of the kind to maintain or improve the good qualities of past times, but he must remember that the existing qualities and character of to-day and the past ten or fifteen years is a matter of prime importance. Bad management has ruined many a good old sort, while good management has placed many a comparatively new sort in the front ranks. Nothing can justify weak loins, narrow chest, light flanks, and thin flesh, while the new beginner may be sure that broad, heavy, deep, thickly fleshed cattle will stand day or other amply justify themselves and their pedigree.

"Another very serious obstacle we have to encounter in carrying forward a reformation is the dead meat trade, so suddenly developed at leading marts in the West, from which the carcasses of range cattle are shipped in refrigerator cars to compete with the products of legitimate agriculture along the lines of our principal railways in all the States east of the Mississippi River. With the defective taste of the mass of consumers, who regard all beef as good that is not tough, these carcasses that are not put up by the market by the retailers until eight or ten days after slaughter, have become comparatively tender by the process of decomposition, and in consequence are often pronounced to be good beef.

"A new beginner should make up his mind to eschew fashion and make utility his sole aim. He should buy cattle not only good in themselves, but such as are known to have come of good sorts through recent generations. Pedigree is of the utmost value to him; but he must take care to use it rightly. He must guard against attaching fictitious importance to names and reputations which may have been justified by the facts of thirty or forty years ago. He should certainly try and secure the benefit of such a foundation where the recent management has been of the kind to maintain or improve the good qualities of past times, but he must remember that the existing qualities and character of to-day and the past ten or fifteen years is a matter of prime importance. Bad management has ruined many a good old sort, while good management has placed many a comparatively new sort in the front ranks. Nothing can justify weak loins, narrow chest, light flanks, and thin flesh, while the new beginner may be sure that broad, heavy, deep, thickly fleshed cattle will stand day or other amply justify themselves and their pedigree.

"In view of these considerations, the farmer who carries on the business of cattle growing as

Horticultural.**WEST MICHIGAN FRUIT GROWERS' ASSOCIATION.**

Annual Meeting at Paw Paw.

The West Michigan Fruit Growers' Society held its annual meeting in the Court House in Paw Paw, beginning on the evening of Dec. 7th. There were delegates present from Oceana, Ottawa, Allegan, Berrien, Kalamazoo and Cass counties, and quite a large attendance from the shore towns and the interior of Van Buren. After the welcoming address, responses, and President's address, reports were received relative to the last season's apple crop. On all hands, along the lake shore, a bountiful crop was reported, but on oak lands, farther from the lake, the apple crop was nearly a failure from premature ripening, causing them to drop before maturity. Some splendid specimens of winter apples were shown by Mr. Andrews, of Allegan, comprising some new and rare varieties.

C. Engle, of Paw Paw, exhibited 13 varieties of seedling grapes, which created quite a flutter of excitement among the grape men present.

Thursday morning, the 8th, after some preliminary work the topic "Location and soil for an apple orchard" was discussed.

W. A. Brown had travelled extensively in the west, and found apple growing, except some of the Russian or crab varieties, had been abandoned, and in our own State many old orchards on lands not suited to their growth and development, were declining in vitality, so that where the two qualities of strong lands and elevation were combined, the apples of the future must be raised. He claimed that the northern shore counties had great advantages for apple growing, producing as they do the best keeping apples in the United States.

Mr. Andrews' soil is gravelly loam with a good many stones. He sometimes had to dig a stone boat load before he set a tree. His trees had done as well as they could do on such soil, and bore large crops every year. He plows his orchard once in three years and thinks more damage is done by plowing too much than too little.

H. Dale Adams would plant an orchard on elevated land, and he didn't care whether it was protected or not; winds have no appreciable effect on an orchard.

Distance apart for apple trees was considered at length. A trick of the trade was to advocate 20 to 24 feet as the proper distance, as more trees could be sold for an acre. Most of the members advocated 40 feet as the proper distance. Too much top and too close together has been the ruination of many orchards.

Varieties for home use and market brought out the usual diversity of taste and preference. The Wagons got many hard blows, while Baldwin and Northern Spy retained all their old friends. Greening was valuable on strong clay or gravelly land, but was worthless for lighter soils.

L. H. Bailey, Sen., planted his trees 40 feet apart and they are now too thick. For the money there is in them to sell he favored Baldwin, Stark and Ben Davis. He related in his quaint way how he got even with commission men. He sent 30 barrels to Chicago and the returns showed \$1.50 per barrel. He telegraphed to a friend there to go and see about it, and buy some apples and take a receipt for the price. The friend found the apples mostly unsold and held at \$2.50 per barrel. He brought a barrel, took a receipt and sent it to Mr. Bailey, who said he got enough out of that man to pay his taxes. There was a loud call for the name of the South Water Street fraud, but he said the man sent him a twenty dollar bill to keep his mouth shut, and he was no going back on him.

In this connection Mr. Bailey told how he drove all the codling moths to his neighbor's orchards. He mixed half a tumblerful of ammonia with a pail of water and sprayed his orchard at night while his neighbors were asleep. He did this two or three times during the summer, and was wholly exempt from the depredations of the codling moth.

Mr. Adams thought Stark only suitable to plant on strong land, it would not do on light soil.

In a talk upon grapes Mr. Lannin, of South Haven, said grapes were of three kinds, the white, black and red, with many varieties each of these. He preferred the Niagara for white, the Warden for black and the Brighton for red.

President Phillips had tested 41 varieties, and he recommended Mr. Lannin's selection.

W. A. Brown thought this selection an excellent one, except that the grape rot had attacked both the Niagara and the Warden in his vicinity, and he thought it only a question of time for it to go through the country like the peach yellows. The Ives, although not the best in quality was well nigh invulnerable to the rot.

Mr. Engle had been experimenting for years with seedling grapes. Not one in 50 of Concord seedlings were good. He had best success from the Salem. All the seedlings exhibited were from Salem. He had one red grape he thought a great deal of, but that was too good to keep well.

Mr. Adams endorsed the selection of Mr. Lannin. He thought the rot more liable to attack vineyards than single vines.

Mr. Lannin would plant a vineyard on land sloping to the north to retard the early blossoming and evade the spring frost.

J. C. Gould would not stop planting a vineyard because he had no ground sloping to the north. New blossoms would appear if the first were killed.

"Insect enemies." This topic was discussed at length by W. A. Smith, of Benton Harbor. An apple buyer who bought 4,500 barrels of apples re-sorted them and only got 800 barrels of perfect apples. This great loss was almost wholly attributable to the codling moth. They are too sharp to be caught in straw or paper traps, suggested years ago. There must be something more effective. He described at length the process which he had employed to eradicate the moth. He placed two kerosene oil barrels on a wagon, with the head out of one, in which he mixed the London purple and kept water saturated to keep it from settling—this is essential. In the head of the other barrel he bored two holes, one for the pump, and the other to pour in the mixture through a

funnel from the other barrel. A boy to drive, a man to handle the pump, and one to agitate and pour in the water for the pump was the force required. Drive down one side of a row, and back on the other, spraying the side next the wagon; then go the other way of the orchard in the same manner. He thought three-fourths of a pound of purple to a barrel of water a large measure he often used only half a pound. He buys in half pound packages, and mixes into a paste first, in a pail of water. It separates in the larger quantity of water much easier by thus mixing first. Persons were now making a business of spraying orchards for two cents a tree, and furnish everything. He would go over the orchard twice, and he even thought the third time would pay better than ordinary work on the farm. He starts in when the trees are fairly out of bloom and then goes over them again in about ten days. This is beyond the region of experiment, it is a regular business in his neighborhood. Professor Cook was given full credit for being the pioneer investigator in this enterprise.

J. C. Gould was called out on the topic of "Picking, packing and storing apples." Apples must be mature. He would pack in any way that it could be done fastest. He would place in barrels as fast as picked and lay the head on and haul under cover, and sort later. For some varieties advised going over the trees twice, selecting the ripe and colored apples first, and allowing the others to remain to ripen. These later ones will often grow and color up better for picking over a part.

B. G. Buell would not pick winter apples before the 25th of September, and from that to the 10th of October. For packing he used a large table with strips two inches wide nailed to the edge. On this he places blankets and pours on the apples. By the side of the table stands the barrels in which the apples are to be packed. He would not lay in piles in the orchard; he thinks the flavor and texture are spoiled by such exposure.

At this point, the Farmers' Association presented through its secretary, Mrs. N. H. Bangs, the following topic, "To what extent should the general farmer engage in fruit growing."

D. Woodman would have every farmer raise all the fruit his family needs. He would find the time by getting up in the morning early and attending to it before breakfast.

Henry Chatfield, of South Haven, was called out as being a fruit grower and general farmer combined. He said the man must develop some capacity for the business, and provide the necessary help in season. He said the reason that some fruit growers fall is that they put all their land into fruit, and have no fertilizers for it. He uses only one-third of his land for fruit, and farms the remainder, and keeps all the stock he can to work up the fodder for manure for his fruit.

J. J. Woodman thought it was running just about as it ought to. He thought it not best for the general farmer to try to raise everything.

H. Dale Adams plants fruit so that sufficient for the requirements of the family is produced, and sells the remainder, and his wife pockets the money.

Quite an extended discussion was entered upon but space forbids further report.

At the evening session A. H. Smith read a paper on "Surface Irrigation," which is given in full:

Under ordinary circumstances the roots of a tree extend in a circle whose radius is equal to its height. This is probably true in dry seasons, like last, by the time of irrigation, more trees are grafted than in all cultivation within this circle. The trees having prior possession of the ground absorb what moisture there is and other varieties what moisture there is and other vegetation makes a sickly growth.

Those who contemplate surface irrigation of fruit trees should procure a rain gauge and keep a correct record of rainfall during the growing month of the year, from April 1st to Oct. 1st. From records made at Lansing during a period of 10 years, we find the average rainfall per month during the growing season to be 3.40 inches.

During the next winter, that man must pass away before the whole truth becomes apparent. Now, since orchard trees have begun to decline in vigor, and to put on the semblance of age and consequent barrenness, the question is raised as to the cause of this premature loss of vitality, so unusual in the eastern states. Innumerable theories are extant to define the cause of this terminal condition of the trees. Many disengaged farmers are uprooting and cutting down the trees, which long before were both the pride and the price of the farm. There are persons present doubtless, who will tell you that the unfettered winds have brought about the disaster, that the earth is gradually tipping toward the pole, and thus bringing about us and over thermal changes, that blast our orchard trees. Others who had theories of certain diseases, or of various grafting methods, did not universally prevail and are now discredited. It is most probable that the inverted tops, will begin to emit roots before the top buds start. If the spring is dry it may be necessary to water the bed a few times. When beginning to root put the bundles in water and stick in shallow soil down to the top bud.

Horticultural Notes.

In Eaton County complaint is made that few new orchards are being set out to take the place of those going to decay.

HOVEY'S strawberry was the first pistillate berry introduced. It was originated by the late Charles M. Hovey, and for twenty years was awarded a yearly prize by the Massachusetts Horticultural Society.

MR. COLLIER, of the Eaton County Horticultural Society, recommends the Golden Russet as a profitable apple. The tree is free from borer and stands grafting well, it is also hardy, enduring our climate. He would set trees not less than forty feet apart.

THE PHYLOXERA is now reported to be nearly as bad on the roots of grape-vines in California as in Europe. The Californians, however, are too wide awake to get lost, and are grafting on varieties of the species *Riparia*. The insect attacks these roots as well as those of European species, but on account of their fibrous rootstock character they do not suffer much, as the roots grow faster than the insect can follow them.

TOOSEY orchards under consideration, whose vigor is weakened, and which have begun to fail, should be when fertilized with manure and varying. Rotations of grain crops, with frequent clover, will keep it up to a degree of production quite satisfactory. But when continuous cropping prevails, the land reverts back to the primitive drift, in which plants fail to find their proper sustenance. Young trees planted in such soil in its virgin state, even in the limited space of 30 feet apart, made a vigorous yearly growth which promised large profits in a short time. This is due to the fact that the soil is well aerated, and still further depletes the stores of fertility beyond the demand of sustenance for the young orchard. As the trees grow, the roots spread and interlock, embracing every inch of open space where a particle of plant food may be found. An apple tree, in the early days of orchard setting, was originally supposed only to need standing room, and the idea that the soil would not bear fruit does not prepare for it the year before, by growing fruit spurs and buds and new wood. There is no miracle that can multiply the five leaves and two small "fishes" of fertility, to supply the many mouths open to be fed, and so the weaker trees starve and die, and the remainder million twigs divide the scanty store and make sad and slender efforts at building up buds and new wood for the annual crop of fruit.

I have here outlined what I believe to be the real cause of the dearth in vitality of our orchards. No tree can continue vigorous unless there is sufficient energy to promote a natural yearly growth. A tree also cannot bear fruit that does not prepare for it the year before, by growing fruit spurs and buds and new wood. There must be a constant store of nutrition naturally in the soil, or it must be supplied by top dressing from the barnyard. The same solvents in the earth that go to the development of grain, ascending through the roots of fine specimens, when if we wait a few days for rain and it does not come, the crop is ruined as far as size and quality goes.

MONTGOMERY WARD & CO. 111-114 Michigan Avenue, Chicago, Ill.

It is difficult to keep a tree in health during a drought. In looking over the State precipitation reports for a number of years, I find but one month during the summer season when the rainfall was less than one inch. It will usually be found that a barrel or two of water applied just at the critical period will insure a full crop of fine specimens, when if we wait a few days for rain and it does not come, the crop is ruined as far as size and quality goes.

Mr. Adams had been experimenting for years with seedling grapes. Not one in 50 of Concord seedlings were good. He had best success from the Salem. All the seedlings exhibited were from Salem. He had one red grape he thought a great deal of, but that was too good to keep well.

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peaches without the long summer's drought, and copious rains coming just before they ripened, produced a crop fully equal to the average.

Pears and apples need a reasonable amount of water, but not necessarily more than the past extremely dry season a few experiments may be instructive. Two Elmhurst Beauty pear trees standing side by side called in the plainest language for moisture. About half the foliage was gone and the half grown pears were beginning to drop. A barrel of water was rolled to one tree, and allowed to run out slowly, twenty-four hours later the difference in foliage was noticeable. The watered tree stopped dropping its foliage and fruit, while the tree not watered continued to drop both. This tree then received a bucketful of water, and the same result, but the twenty-four hours difference in time of application was never made up. The first tree watered had the largest pears and carried the most foliage.

The June meeting will be held at Benton Harbor. A. C. G.

Among the Cabbages.

Our home method of growing cabbages is as simple as it is reliable. When sowing seeds of early vegetables for home use, we also drill in our early cabbage seed, and a few weeks or even months afterwards that of later kinds. The plants are thinned to stand the proper distance apart; and as we always leave the very thickest and most promising plants in the rows, every one will form a solid head if the conditions are otherwise half-way favorable. The "thinings" may be planted elsewhere, so as follows:

In the autumn of 1879 I had 15 colonies, and as that was a year of great scarcity I fed each colony largely of sugar-syrup, and wintered them on the summer stands. In the spring a plow cup would have held all the dead bees from all the colonies.

Having purchased a few colonies in the spring of 1880, I began the disastrous winter of 1880-81 with 60 colonies; to 30 of these I fed a limited amount of sugar syrup, and of these 16 survived; of the 30 colonies not fed, three perished.

For the present I pass over the next three winters in the still more disastrous winter of 1884-85, only saying that during the fall of 1883, as an experiment, I supplied a few colonies with sugar stores, and those thus prepared wintered to much better than those having honey stores, that in the autumn of 1884 I gave all my 200 colonies empty combs, and fed them syrup. The result was, that while all the other bees with but few exceptions in that part of Michigan perished, there was not a colony in mine in a normal condition, but so far as I could judge, wintered perfectly. These bees were wintered in a cellar.

During the following winter my loss was about 12 per cent. of bees, managed in every way precisely the same, except that their stores were partly honey and partly syrup, and thus though the winter was much more favorable for the successful wintering of bees.

During the next winter, that of 1886-87, I had in two cellars at home, nearly 400 colonies. Of these about two-thirds had honey stores exclusively, but the other third being in single sections of the new Hedden hive, were almost destitute of honey, and consequently were supplied with stores of sugar syrup. Each kind was divided between the two cellars. The temperature of one cellar was kept at 50° Fahr., almost without variation, while that of the other varied from 35° to 45°, but this difference in the temperature seemed to have little effect on the condition of the bees—if there was any difference it was in favor of the lower temperature.

But what a marked difference was there in each cellar, between the colonies with sugar stores and those with natural stores! Of the former the bees were the picture of comfort and contentment, quiet, closely clustered, not easily disturbed, not a diaphoretic sign, and only now and then a dead bee dropping out of the cluster. Of the latter the bees were uneasy, not closely clustered, easily disturbed, dying by the thousand, and many of the bees bearing the unmistakable signs of disease, and as I have said, if there was any difference, those in the cellar with the rather high, even temperature suffered the more.

One fact more: During the three winters from 1881 to 1884, which I have mentioned above, I wintered my bees in the same cellar on natural stores, under precisely the same external conditions, so far as it was possible for me to judge; yet the first winter they wintered perfectly, while the other two winters they wintered ill, and with considerable loss. I cannot account for this, unless there was a difference in the stores.

Out of my own experience there is one thing I do not fail to remember, and that is, that there is little agreement, and apparently little prospect of agreement, among beekeepers as to the necessity or the methods of securing ventilation, a high temperature, a dry atmosphere, late brood rearing, or even as to the necessity of cellar wintering; but they are in practical accord in affirming the necessity of supplying bees for winter stores of a good quality. This is a significant fact. Stick a pin here, and bend a hook on the point of it.

And again, why is it that bees in the cellar suffer most severely during winters when they suffer most out-of-doors?

Without stating my deductions at length, let me only say in conclusion that I have found among my own bees, that colonies with plenty of good stores, known to be always well wintered, while those with stores of a doubtful character winter more or less disastrously.

I am satisfied that I cannot winter a colony well on stores that are decidedly poor in quality, by any method with which I am acquainted. Who can inform me how to do it? I am confident that I can winter any fair colony well, on stores which are certainly good, by any of the approved methods. Who doubts my ability to do the same?

Of course it is not to be denied that a low temperature, etc., seriously aggravates the ill effects of poor stores, but I seriously question whether, unless present in an extraordinary degree, they would seriously affect the welfare of a colony well supplied with pure stores.

JAMES GREEN, of the Ohio Experiment Station, says: "The White Plum is one of the rare things that was not too highly praised, when introduced. For all, except the very latest, it is decidedly the best variety known. There is more or less seed of it sold, however, that is not pure. It can not but cause loss to the grower to find that a large share of his crop will not branch without earthing to the top. Nellis' Self-Banching and Ward Self-Banching appear to be identical. They are very pretty, much finer than the golden Dwarf. Half-Dwarf and Boston Market are still the standard late sorts."

JOHN VAN BOCHMEL, of Kalamazoo, furnishes a detailed account of the celery culture at "Celererville." He says 2,000 acres are under cultivation, from nearly all of which two crops are taken in one season. In some instances three hundred acres have been secured. Eighteen hundred persons are engaged in its cultivation, and 3,600 get their living directly or indirectly from celery. From 20 to 30 tons are shipped daily during the season, which continues nearly five months. Land near deer at \$30 per acre is now held cheap at from \$200 to \$400, according to location.

The lumber used for packing boxes last year cost \$30,000; and the value of the celery shipped this year exceeds \$500,000, pretty close.

Be sure to get Hood's Sarsaparilla if you want an honest, reliable medicine. Do not take any other which is alleged to be "about the same," or "just as good." Insist upon having Hood's Sarsaparilla, which is peculiar to itself.

round \$1,000,000. There are steps being taken to extend the extradition laws to cases of embezzlement.

A cyclone which struck Fort Washita, I. T., last week, leveled half the houses in the fort, and nearly destroyed the little village of Oketo, six miles away. Two persons were killed, and many injured. Two children were carried sixty yards by the wind, and so mangled as to be almost unrecognizable. The duration of the cyclone was less than six minutes, but a great deal of damage was done.

The chief officials of the Pittsburgh & Erie railroad have for some time suspected that there was something very crooked somewhere in the sales of tickets and the receipts of the road. To find out the location of the crookedness, 40 of the employees, those in the passenger department, were called in and laid off, including even the general passenger agent of the company. The officers of the road are after the scalps of the offenders, whether their own clerks or ticket buyers.

On the afternoon of the 21st a terrible explosion occurred at the People's flour mill at Newark, N. J., killing three persons, injuring twenty more or less severely. The cause of the explosion was that the sewers in the vicinity were filled with naphtha. Fourteen thousand gallons of naphtha were pumped from the tanks and sent through pipes laid in the bed of an old canal. Breaks in the line allowed the naphtha to escape into the sewers, and these became filled with inflammable gas; it took fire from the mills or elsewhere. One series of explosions occurred, covering wide extent of town. The伤者 were Washington, Jefferson, and Clinton mills were wholly or partially destroyed.

A raft of lumber being towed from Nova Scotia to New York, was lost during a heavy storm last week, and is now drifting in the ocean. The raft, which is owned by a New York ship builder, was composed of about 27,000 feet of lumber, 600 feet for each wide and 38 feet high. It was shaped like a cigar, and presents 14 to 16 feet of its immense bulk above water. It was bound together with chains and will hold together a good while. It has been drifting for 10 days out to sea and into the track of ocean-going steamers. Ship captains are much exercised and insure that the huge mass must be secured or blown up, as even a slight collision with it would carry ruin to the largest steamer.

Foreign.

Maurice Bernhardt, son of the noted actress, is to marry the great-grand-daughter of Lucifer Bonaparte, actress Jablonowski.

Cabannes, the German official who revealed the contents of the State documents to France, gets ten years of penal servitude, and is deprived of civil rights for ten years afterward.

The Great Eastern, the mammoth vessel which proved too large to be profitable and so became a "white elephant" on the owners' hands, was sold to be broken up for old metal last week. It brought £18,100.

King Jagiello, of Poland, has recently issued an edict forbidding subjects as a warning to others not to permit traders to go into the interior. The English government will banish his male majesty to the island of St. Helena.

Prince Krastopolsky is in favor of suppressing prisons and allowing crimes to be permitted at all. He holds crimes are the result of diseases of the stomach, heart and brain, which must be cured to prevent the commission of crimes.

Whether Austria or Russia are only the countries of agitation which follow, the slightest activity in military circles in Europe, or whether the great powers are really going to let slip the dogs of war" is what no one can know for certain.

The threatened war between Austria and Germany on one side and Russia on the other attracts a good deal of attention. People believe the war is inevitable, sooner or later. Russia has a force of 1,000,000 soldiers and 60,000 marines, with a population estimated at 100,000,000 to draw from, but the Czar is not the only ruler in Russia, and his people are the rulers of the opposing countries. It is asserted that in case of war Austria and Germany would invade Russia, and that the progress of a war in a country so large would be slow. Russia, Russia with a transfer of 16,000 miles, would find it impossible to defend such an area.

NEW ADVERTISEMENTS.

THE BIGNELL POST POWER.



FOR FARM USE!

Especialy designed to meet the wants of farmers who desire a light horse for farm use, which will be always ready to operate and never in the way. A well proportioned animal, the Bignell Post Power is strong, durable and so simple in construction that it cannot get out of or enter the stable from horse to other machine without jack or tumbling rod.

THE NEWEST THING AND THE BEST!

SMYRNA BELLS, made of American steel metal, and for volume and purity of tone are not to be excelled.

For information in regard to any of the above call on or address F. B. BIGNELL, Smyrna, Mich.

28-181

HELLO!!!

For the finest poultry, the best butter and the finest eggs go to

MRS. J. FALTIS & SON, No. 201 Woodward Avenue, or 8 All No. 3 Central Market. Game in season. Telephones: Woodward Avenue, 1-131; Central Market, 1-210.

The highest market price paid for dressed or live poultry, fresh eggs and choice butter.

STOCK AND GRAIN FARM FOR SALE.

Contains about 230 acres: 170 acres under high state of cultivation, balance in meadow and timber; new house, good fences, three good wells with constant water on two sides of the farm; new Potomac windmill, situated about two miles southeast of the village of White Pigeon. Price only \$5.00 per acre; terms one-half down, five percent interest, and on balance at six percent interest. Possession given April 1st. For further particulars address

T. CLAPP, Banker, White Pigeon, St. Joseph Co., Mich.

A Good Stock and Grain Farm For Sale.

Contains about one hundred and eighty-five acres one hundred and forty of which are improved, including a fine orchard and good buildings on the place. Situated two miles west of the village of John Clinton County. For further particulars and terms of sale R. B. CARUS, St. Johns, Mich.

Duroc-Jersey Swine.

A choice lot of full pigs, sows, gilts and hogs for service. All stock required. Price low. Write for prices.

QUINCY MCBRIDE, Burton, Mich.

Pure-Bred Poland-Chinas.

Stock recorded in both Ohio and American records. A few choice pigs for sale, size of Zack 491, Ashey's Perfection 453, and Rave 988. I shall breed a few sows to sell.

HENRY M. MORSE, Union City, Branch Co., Mich.

GREENWOOD STOCK FARM

Poland China Swine a Specialty.

Stock recorded in Ohio Poland China Records.

Correspondence and inspection invited.

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Sired by Proud Duke of Fairview 20709, and Lord Burlington 28241, out of Young Lady Elizabeth, Peacock Duchess and Rose of Sharon cows. Also a few cows and heifers. Reliable catalogues always on hand to correspond.

R. E. ADDISON, Addison, Lenawee Co., Mich.

SUMMIT POULTRY FARM, devoted exclusively to the raising of standard Plymouth Rock hens for breeding and exhibition purposes. Prices for all breeds. Address: 28-170, trios, \$8.10; one male and five females \$10.00. Address: C. F. R. Bell, Ypsilanti.

EVERY FARMER'S WIFE WANTS IT! The New Non-freezing Poultry Waterer. Price 25¢. Agents wanted [Pat. applied for.] S. A. BACON, Grand Rapids, Ohio.

NEW ADVERTISEMENTS.

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Poetry.

THE OLD YEAR.

Dying, dying is the year,
And the earth is sad;
Sighing, sighing are the trees,
And the winds are mad;
Sleeping, ere the world be sleeping.
Shadows drear
Cross the year.

Dying, dying is the year—
Old Earth, do you care,
For the child, now tired and sad.
Once so glad and fair?
Dying, while the winds are sighing:
Drifts of snow
Hide graves below.

Dying, dying is the year—
Far-thee-well to-night.
You have brought us smiles and tears,
Shadows and the light;
Fading while the dusk is shading
Stars of light
From our sight.

Dying, dying is the year—
Dreams we must forget,
Busted are the hopes it brought,
Buried with regret;
Sleeping, waking, smiling, weeping
All the sad.
All the glad.

Dying, dying is the year—
Comes the new to-night,
Child of light, with wings of gold,
Shadowless and bright;
Flitting clouds of joy swift winging
Over the past
Fading fast.

Dying, dying is the year—
Let the sorrow die;
Bells ring out the sad, I fancy,
Winds forget to sigh;
Sorrow, reign you not-to-morrow.
When the year
New-born is here,
—St. Louis Republican.

FARMER JOHN.

Home from his journey, Farmer John
Arrived this morning, safe and sound.
His black clothes off and his old clothes on,
"Now I'm myself," said Farmer John. —
"For after all," said Farmer John,
"The best of the journey is getting home.
I've seen great sights; but would I give
This spot and the peaceful life I live
For all their Paris and Rome?"

"I've found out this," says Farmer John,
"That happiness is not bought and sold.
And wealth isn't all that's wanted.
But in simple ways and sweet content—
Few wants, pure hopes, and noble ends,
Some land to till and a few good friends—
That's what I've learned by going away." —
J. T. Troubridge.

Miscellaneous.

HE AND SHE.

"To me, fair friend, you never can be old; —
For as you were, when first your eye I ey'd; —
Such seems your beauty still."

Sonnet.—Shakespeare.

It was twilight; and the flickering flames cast weird shadows on the walls of Marion Eldershaw's studio. Marion sat bolt upright in an armchair, her hands clasped together across her knees, staring into the glowing embers. Her handsome face was faded and worn; there were silver streaks in her dark hair; her very hands had lost the look of youth; she was just thirty, and she looked years older.

By her side, crouched on the hearthrug, was a widely different specimen of womanhood—a red-haired girl with a placid, unruled brow, and a complexion of dazzling fairness.

"I had hitherto supposed, Ethel," said Marion, breaking the silence; "that woman had two advantages over men."

"Only two?" Ethel came a little nearer. "What are they?"

"You are not liable to sit on a jury, and you are not expected to go to funerals; but it appears that I have made a mistake. My poor old cousin's lawyer has sent me an invitation (it's a ghastly mockery, but I don't know what else to call it!) to be present at the ceremony on Saturday. I never saw my cousin since I was a child and then I did not like him at all. I don't see why I am bound to go all the way to—shire just when I have promised to finish my picture, but I suppose I must."

"How hard you work!" exclaimed Ethel, admiringly.

Marion had met Ethel Heath in the summer; she had heard her spoken of as an orphan girl of independent means whom it would be a kindness to befriend. Entirely fascinated by her beauty, Marion had begged her as a favor to come and sit for a study of Elaine. The sittings had been prolonged indefinitely as the two got to like each other better, and now there was hardly a day that Ethel did not look into the studio, and the breaking of the ballif's boots within. The will was short and clear.

"Work is the merest matter of habit," answered Marion, "and I had to begin very early. I had a certain amount of talent, no scrap of genius (it's much rarer than people suppose); but in following my profession, behold, I have lost my youth and my good looks."

As she spoke, she took a spill from a vase and lighted the candle that stood on the mantelpiece. A step was audible in the passage, a curtain was pushed aside, and before Marion could stop her by word or sign, the servant ushered a visitor into the room.

"Mr. William Eldershaw."

A broad-shouldered, middle-aged man, with brown beard, he carried himself erect, and had the air of a person accustomed to think for himself and act quickly. He found himself between an easel and a low table, skillfully avoiding a heap of rugs that had been thrown on the floor, and held out both his hands, crying: "Marion! Have you forgotten me all these years? Why, Molly!"—and there was infinite tenderness in his tone—"have you been ill, my dear?"

Marion stood by the fireside; in her surprise and joy she forgot all about Ethel, who had fled from the room. "Will, dear old boy!" she exclaimed, "I have no words to say how glad I am. No, no, no!" (as he repeated his question) "but getting rather old, you know. It's fifteen years since we met."

Hand clasped in hand, they remained for a few seconds looking at each other; then she pointed to a chair and broke into a string of questions. How long had he been in England? Had he been down to—

shire? How was the old place looking? "And, oh, Will, I do hope he forgave you before he died!"

Marion and William Eldershaw were distant cousins; as children they had been inseparable companions, as boy and girl the most devoted friends. Will was an orphan and lived with Marion's father. At the Stone House, hard by, old Mr. Eldershaw supported the family dignity by accumulating wealth and indulging in wild freaks of temper. He never loved the boy whom all the neighbors regarded as his heir; there were perpetual quarrels and misunderstandings. At last Will fairly broke loose from all restraint, and vowed that he would go to Canada and try his luck as a farmer. "Go," said his uncle, "and you will never inherit the Stone House." And Will, in his boyish passion, had answered that the Stone House was nothing to him. The next day he set sail for Quebec, with £20 in his pocket, a light heart in his breast, and a firm resolve to make his fortune immediately and come back and marry his cousin, she would have him. It was fifteen years later, and Will was still a bachelor; he had returned (without the fortune) to find that Uncle Stephen was just dead, that Marion had made herself a reputation as an artist, that she looked sadly weary and overworked, and now it had come only brought disappointment. The Stone House looked dreary in the gray light; the shadows of the elms fell black across the road. The demure housekeeper courtesied deferentially in the hall; she had no scuffle for the new owner. The ticking of the clock sounded ghost-like in the passage as Marion passed. With a shudder she turned to Will, who was waiting to help her into the fly. "I don't think that I shall ever feel at home here," she said.

* * * * *

The weeks flew by, the commissions were disposed of, the picture of Elaine was well nigh finished, and still Marion Eldershaw put off facing the fact that some day, soon, she must go down to her new property. Will was still in England (she had given him full permission to act in her name); now everything was ready, and he would persuade her out of this dislike to her country home, all would be well.

For a quarter of an hour the cousins talked; at the end of that time Marion went to look for Ethel. "She is the loveliest little maiden you ever saw, Will," she explained, as she left the room; "and I expect you to be very nice to her."

That evening, when her visitors had departed, Marion hit upon a brilliant plan. Will was utterly unchanged, he was just the same good-natured fellow as ever. He was sure to inherit the Stone House property (had not Uncle Stephen sent for him to come home?) he must settle down at last as an English country gentleman, and he must marry Ethel Heath. "I have built a good many castles in my day," she thought, "and now I hope to lay the foundation-stone of a lasting one. The first thing to remember is that I must be very cautious, so I will hold my tongue and not interfere too much. Ethel, especially, must not know anything about it. Will is so good, I am quite sure of him or I wouldn't turn match-maker, and he did admire her immensely. If there is one person in the world I ought to understand, it is Will Eldershaw."

For the next few days Marion was very busy. Will came in whenever he had time; he took the profoundest interest in the picture (for which Ethel was sitting), declaring that if the little maid really looked like that, "she deserved the title of Elaine, the Elaine, the lovable."

* * * * *

On the afternoon of old Mr. Eldershaw's funeral the wind blew fiercely across the marsh land that formed a part of the Stone House estate. The huge elms in front of the library windows towered up into a gray sky. Mr. Eldershaw always liked the room in spite of its eastern aspect; here he had sat with his newspaper and short pipe, here he had hung the ballif, scolded farm laborers, and quarreled with his neighbors when he got the chance. And here were now assembled his two relatives, William and Marion Eldershaw, his doctor and his lawyer. Seated on a bench at the farther end of the room were the housekeeper and the farm ballif. On a big round table was a tray containing wine and cake. Just behind it hung an engraving, the Duke of Wellington standing by the bier of his great enemy. Marion, looking round the room with a scarcely suppressed shudder, remembered the picture, and how, as a little girl, she had shut her eyes and run past it, if by any chance she had been left in the library alone. She remembered, too, the red flock paper, the musty smell of old books, the leather-backed chairs, and the sound of the elms as they swayed too and fro in the wind. It was a dreary place in which to eat. Ethel was expected; of course he must stop to dinner.

The fire had gone out—perhaps that gave an air of discomfort to the place; the lay figure's head was on the floor and its arms were extended upwards; a table was strown with unwashed paint-brushes.

"I'm sorry it's so uncomfortable. Things accumulate. I sometimes think life is not long enough to be tidy."

"It's all right, Molly. I don't mind, as you know; but I should think it was wretched for you; London altogether is odious in this lovely weather. Why don't you go down to the Stone House?"

"Will you come, too?"

"Well, no, I'm afraid I can't. But look here!" (his eyes rested on the picture of Elaine), "take Miss Heath; she is a delightful companion, and it would do her good to get away."

"Do you think so? I will try and make her go, and then you will come down on Saturdays?"

"I will come next Saturday, but my time is growing very short."

"Will!" exclaimed Marion suddenly, almost as if she had not heard his last remark, "what's the farm-house like?"

"Don't you remember?" he asked reproachfully; "it is a good, substantial house with plenty of room."

"We will throw out bow windows and build a wing if necessary, and then Will, dear Will, give up your other farm and come and work for me. Be my viceroy or manager, or whatever people call it, but come and live down there and save me from the horrors of an undeserved inheritance."

It was a great temptation; his prospects in the colony were by no means brilliant. He loved the place, he loved the very sound of her voice, he—No, it was impossible.

If anything went wrong and she wanted him, he would come, wherever he was, but he could not and would not stay for good.

"We could make it very pretty," pleaded Marion. "And then, Will, you must marry. Let me find you a wife. I know so many charming girls!"

Will blushed as he took her hand in his. "Molly, you are goodness itself; but it cannot be." She would have interrupted, but he went on: "I cannot afford to marry. It is a pretty dream of yours, but I must not think of it."

"You will have an income, Will, of course," she said eagerly.

"How can I accept an income which I do not earn? You do not want a manager—there is not enough to do." He spoke so sternly that she drew away from him, half hurt. "And besides, the proper viceroy at the Stone House will be your husband. Wait till he comes, and he will take all the trouble off your hands."

"Then I shall never have the trouble taken off my hands, for I shall die an old maid. If you will not come, I must face my responsibilities alone, but, oh! I am bitterly disappointed."

The hot tears were on her cheeks as she spoke; she put up her handkerchief hastily to wipe them away.

Will took a short turn up and down the hearth-rug. "I believe that you are the best woman in the world," he said abruptly, "and I am a brute."

"Does that mean that you are relentless?"

"It means that I wish to tell you that I am grateful."

"Grateful for what you won't have, small as it is! Never mind, Will, we are old friends, and I forgive you."

Nevertheless, he was passionately attached to the old place, and it was hard to know that he had thrown away his birthright in a fit of youthful pride. Besides, there was another secret. Who was he, to raise his eyes to the mistress of the Stone House? Could he ask her to wait while he returned to Manitoba in search of that fortune in which he had believed as a boy? As he stood there listening to the speeches of the lawyer and doctor, he could have found it in his heart to curse his fate. She was very

dear to him, and he must go away and perhaps never set eyes on her again—not just yet, however; there were business matters to be settled and instructions to be given about the estate. "My cousin, Mr. Eldershaw, will arrange all that for me," Marion said, and Will assented cheerfully. As far as in him lay he would obey her wishes and save her trouble, and she would never know how he had hoped to say, "Come home to the Stone House and be my wife, dearest Molly."

"You will find it somewhat bleak here in winter, I should say, Miss Eldershaw," observed the doctor, rubbing his hands. Marion replied that she had too much to do in London to think of leaving her studies for months to come. The doctor suddenly remembered that he was addressing an artist of some reputation, paid her a neat compliment on her last picture, and bade her recollect that he was a old proverb, very wisely prohibited all work and no play.

A fly had been ordered to catch the evening express to town, and Marion rejoiced to hear the rumbling of wheels on the carriage drive. She was worn out with fatigue and excitement; she could hardly realize the great change in her circumstances; she used to wish for money and an easy life, and now it had come only brought disappointment.

The Stone House looked dreary in the gray light; the shadows of the elms fell black across the road. The demure housekeeper courtesied deferentially in the hall; she had no scuffle for the new owner. The ticking of the clock sounded ghost-like in the passage as Marion passed. With a shudder she turned to Will, who was waiting to help her into the fly. "I don't think that I shall ever feel at home here," she said.

* * * * *

The weeks flew by, the commissions were disposed of, the picture of Elaine was well nigh finished, and still Marion Eldershaw put off facing the fact that some day, soon,

she would be getting acclimated already!" he said heartily, and she did not contradict him.

Even the approaching separation could not spoil the happiness of those few spring days. There were walks and drives and talks; Marion was wonderfully bright, Will the kindest of guides, and Ethel the most easily contented of visitors.

The sun was shining on the morning of his departure. "She is going to stay with you, I hope?" he asked. "Ethel, I mean?"

"Yes, yes; I will do my best to keep her and make her happy. Perhaps we will see you back before the year is out!"

"You will not see me back till my fortune is made or making, unless you should want me."

"I want you now."

He shook his head. "You know what I mean, Molly—any real difficulty or trouble, not 'make believe,' as you used to say when you were a little girl—then I will come. God bless you! Good bye!"

He could not trust himself to say another word, but fainted bolted out of the house.

For six months she wrote to him regularly. Then there came a break, and Ethel Heath took up the correspondence. Marion was tired, she said, or had begged her to catch the mail, and many such excuses, with which ladies are wont to fill their pages.

"I'm glad she is not alone," thought Will, and in every letter he expressed his satisfaction that Ethel had been persuaded to stay on.

* * * * *

In the meantime he was working his hardest. And now, strange to say, when he had given up hope and come to regard himself as an unsuccessful man, fortune began to smile upon him. The harvest was good and the farm did well; a young partner, who had formerly given a great deal of trouble, came into money, bought stock and settled down into hard-working industry. Some years ago Will had invested his savings in a mining company, which had never brought him in sixpence; now, all at once, a new vein of ore was discovered and the shares went up like wildfire.

One night, towards the end of February, he sat brooding by the fireside. Should he wait another year? Should he wind up his affairs and go home—now at once? Would she be glad to see him? He knocked the ashes out of his pipe and sighed. The clatter of a horse's hoofs aroused him. His partner had just returned, bringing letters from the post, and a telegram:

"Has been fire at Stone House. Much damage done. Come if possible. Marion seriously ill—ETHEL."

The following morning at daybreak saw him driving across the country to catch the first train to Halifax, and, if possible, the next steamer for Liverpool. It was a rough passage, and there were but few people on board. Will did not care; he was in no mood to make himself amiable to strangers. He was madly anxious to come to his journey's end; anything was better than suspense. So he thought when on board ship; but once in the train, steaming southwards,

With the familiar scenery before his eyes, he told himself that any scrap of hope was better than the knowledge that, perhaps, he had come too late. Try as he would, he could not put away from him this one alluring thought: "Suppose it is all over, and she is dead?"

Arrived in London, he drove straight to the station, and travelled down to—shire by night train. He had telegraphed, but there was no carriage to meet him. It was only two miles to the house, and he resolved to walk; better to do that than wait and knock up a sleepy hostler. In the gray cold daylight of the March morning he came within sight of the Stone House.

What a change was there! One entire wing was gutted by the fire, the windows in the long drawing-room were smashed, the frames charred and black. The trim garden was trodden under foot by men and horses; one of the elm-trees had been ablaze, it stood branchless trunk, adding to the horror and desolation of the scene. The door from the garden was barricaded with blocks of wood; he made his way round to the back. A man came out.

"Is there no one here?" asked Will, briefly.

"No, sir. Family's gone to the farm."

He turned away and walked to the farm house. This, too, looked deserted—the blinds were drawn down in the upper rooms. He knocked at the hall door—no one came; he turned the handle and entered. There was a fire in the parlor, at all events; he could see the ruddy glow and hear the crackle of wood. In the passage he came across the housekeeper, carrying a tray.

"Heart alive! Mr. Eldershaw, sir. I never expected you!"

"How is she?"

The housekeeper wiped her eyes with her apron: "But badly, poor young lady, but badly. Oh, sir, what a calamity!"

Dimly conscious that (in spite of her grief) the old woman was thoroughly enjoying the horror, he strode past into the parlor. A lady was writing at a table by the window. "Was it Ethel?" No. She jumped up and ran towards him with eager hands outstretched, with eager voice bidding him a thousand times welcome. It was Marion—Marion, whom he thought to find dying—Marion's voice in his ears and the grasp of her dear hands in his.

YOUNGSTERS.

Golden hair and eyes of blue—
What won't they do?—what won't they do?
Eyes of blue and locks of gold—
My boy, you'll learn better when you're old,
The padded foot, the taper waist—
Be so in haste, be not in haste;
Before your chin sprout twenty spears,
My word for it, youngster, they'll appear.
Hawk's hair and eyes of night—
Undo the boys; and 't ser's em right.
Eyes of night and raven hair,
They'll drive you, lad, to sheer despair;
The drowsing curl, the downward glance—
They're only waiting for the chance;
As nigh of time they'll sure appear,
Despond upon it, ladle dear.

Sheepish hands and arms of snow,
They know their charm, my boy, they know;
Flexible wrists and fleckless hands,
The lambs that has them understand,
The cheeks that blush, the lips that smile—
A little white, a little white—
Before you know it, they'll be here,
And each you napping, ladle dear.

Hands, and hair, and lips, and eyes,
There the tyro's danger lies.
You'll meet them leagued, or one by one—in
either case the mischievous done.
A touch, a tress, a glance, a sigh.
And then, my boy, good-by—good-by!
God help you, youngster! keep good cheer;
Coax on your chin to twenty spears.

—Century "Bric-a-Brac."

Skim-milk! Folsom's Apples.

The fair for the benefit of the New England Hospital for Women and Children to be held next week at Horticultural Hall, is interesting a great number of people. The Hospital Visitor is to print the following story of the courtesy of Hawthorne at Liverpool:

A young lad, C. R., afterward well known in railroad business matters, had gone away from his New Hampshire home to seek his fortune, and found himself at last in England, homesick, friendless, and almost destitute of money.

He went to the Consul's office in Liverpool and asked to see Mr. Hawthorne.

"You can't see him now," said the clerk, "he is very much engaged."

"But I must see him," said the American boy. "I have no money or friends, and I must get home to America, and he will send me."

"He won't send you," said the clerk; "You're no American; you want to steal a passage."

"I am an American, born and brought up there; and I must go home, and I must see the Consul."

The boy stuck to his point, and the clerk at last went to the inner room and said to Mr. Hawthorne: "Here's a boy insists upon seeing you; he says he's an American, but I know he isn't."

Hawthorne came out of his room and looked keenly at the eager, ruddy face of the boy.

"You want a passage to America?"

"Yes sir."

"And you say you're an American?"

"Yes sir."

"From what part of America?"

"United States, sir."

"What State?"

"New Hampshire, sir."

"Town?"

"Keeler, sir."

Hawthorne looked at him for a minute before he asked the next question.

"Who sold the best apples in your town?"

"Skin-milk! Folsom, sir," said the boy, with glistening eyes, as the familiar byword brought up the dear old scenes of home.

"It's all right," said Hawthorne to the boy; "give him a passage."—Boston Advertiser.

Fat and the Bustle.

Some Norfolk boys found a woman's bustle last week, and being inspired by some lower power, put it in a coal carrier's basket in place of the canvas shoulder pad he had been accustomed to use. When the coal carrier went the next morning with his first load of coal his eye fell upon the strange thing, for which he had no name.

"Pash is this, Moike?" he said to the driver, for although both of them were fat men, they were sorely puzzled. Mike replied:

"Sure, I dunno. I never seed the likes of it before."

Not finding his shoulder protector, the coal carrier saw in it a novel substitute for himself.

"Bozorra, Moike, I have it! This is a shanty shoulder piece the boss has for me!" he put the old bustle on his shoulder, and finding that it was a fair fit, tied the string around his neck. He worked with the new shoulder protector all day, to the amusement of all who recognized the bustle as such high use. Fat noticed that the new protector made him a source of curiosity, but he did not learn the truth until he showed it to the boss the next evening, when thanking him for the gift, he said:

"The inventor of this meant well, but he ever carried coal. These wire cords art nafter that they cut like a knife; but bozorra, the thort is a goo' one, and I can take one or it'll work."

His employer informed him that he had been subjected to a practical joke; that his shoulder protector was a bustle that had been its day and had been laid away.

Mike, the driver, smiled and said: "It's never seen a greater day than this. Twenty of us coal have been on to it. I'll bet a man river never one than Pat Done."

Two Cowards.

A Union Captain relates this story of a young negro named Jack, who was instructed with the Captain's canteen and haversack at the battle of Fredericksburg. He seemed to be very courageous, but the moment the shells began to fall he disappeared and carried the Captain's accouterments with him. The third day after the battle of the regiment to camp, the Captain saw the little scamp approaching—the most woe-begone looking contraband imaginable. His clothes were tattered and muddy, his haversack hung sput downward and his empty haversack was wrong side out.

There he stood, the tears trickling down his cheeks, so pitiable a sight that my eyes moistened, and yet so extremely ludicrous that it seemed impossible to refrain from laughing. However, I got the mastery both face and feelings, and said to him, what was meant for a tone of severity,

You worthless, cowardly little vagabond,

what are you doing here, after running away

with my food? Quick! if you have any excuse out with it!"

"Yes, sah! yes, sah!" said he. "I've got a cause!"

"Well, then," I replied, "let's hear it."

"Well, sah—well, sah—I—I—I've afraid you'll boot me!"

"Boo you! Why there's nothing left of you to boot! But come, let's hear your excuse."

"Well, massa—massa cap'n—I wasn't a massy coward 'an you wah!" and then he boozed louder than ever.

That was a flunker I did not relish; for in the meantime quite a crowd had gathered us, and among the number several officers.

"Well, now, Jack," said I, severely, "you ran away, didn't you, before the first shell had fairly reached the water?"

"Yes, sah."

"Well, Jack, did I run away?"

"No, sah."

"Why then, you black rascal, how dare you tell me in the presence of all these gentlemen, that I am as great a coward as you are?"

"Well, now, massa cap'n, I runn'd away 'cause I didn't dare to stay, and you stayed 'cause you didn't dare runn'd away."—*Youth's Companion*.

What Science does for the Arts.

A single example of how even a petty manufacture improved by the teachings of science adds to the comforts and enlarges the resources or mankind: When I was a boy the only way of obtaining a light was by the tinderbox, with its quadruple materials, flint steel, burned rags or tinder, and a sulphur-match. If everything went well, if the box could be found, and the air was dry, a light could be obtained in two minutes; but very often the time occupied was much longer, and the process became a great trial to the serenity of temper. The consequence of this was that a fire or a burning lamp was kept alight through the day. Old Gerard in his "Herbal," tells us how certain fungi were used to carry fire from one part of the country to the other. The tinder-box long held its position as a great discovery in the arts. The *pyxidicula ignioria* of the Romans appears to have been much the same implement, though a little ruder than the flint and steel which Philip the Good put into the collar of the Golden Fleece in 1439 as a representation of high knowledge in the progress of the arts. It continued to prevail till 1832, when phosphorus matches were introduced, though I have been amused to find that there are a few venerable ancients in London who still stick to the tinder-box, and for whom a few shopkeepers keep a small supply. Phosphorus was no new discovery, for it had been obtained by an Arabian called Bechel, in the eighth century. However, it was forgotten, and was rediscovered by Brandt, who made it out of very striking materials in 1689. Other discoveries had, however, to be made before it could be used for lucifer-matches. The science of combustion was only developed on the discovery of oxygen a century later. Time had to elapse before chemical analysis showed the kind of bodies which could be added to phosphorus so as to make it ignite readily. So it was not till 1832 that matches became a partial success. Intolerably bad, they then were dangerously inflammable, horribly poisonous to the makers, and injurious to the lungs of the consumers. It required another discovery by Schrotter, in 1815, to change poisons, wax into innocuous red-brick phosphorus, in order that these defects might be remedied, and to give us the safety-match of the present day.—*Sir Lyon Playfair*.

Machines for Making Boxes.

The new and curious machines that we are about to describe are of American origin and are designed for the manufacture of packing boxes.

The wood, in the form of boards, after being sawed into pieces of the proper dimensions to form the sides of the box, is planed by powerful machine tools, while making it even and smooth, regulates its thickness. The pieces are next printed with characters in a rotary machine analogous to a newspaper press. This operation is performed very quickly. In addition to its being printed with an indelible ink, the inscription is stamped in the wood, thus making it ineffaceable.

The machine that does this consists of a table, an ink block with its inking rollers, and two cylinders, the whole actuated by gearings and pulleys.

The workman places a pile of the prepared wood on the table, and a tappet actuated by a rod beneath the table shoves out the bottom piece from the pile, and this is caught between the cylinders, which carry it along and print an inscription on its upper surface. Immediately, and at every revolution, one of the pieces is printed and put upon a pile in front of the machine. Above the upper cylinder is placed an ink block, which through an arrangement that is as simple as ingenious, deposits the necessary quantity of ink on the type.

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The printed wood is next passed to the inking machine which is actuated by a belt running over a pulley driven by a line of shafting. The workman, standing in front of the machine, places his foot upon a pedal which acts upon a coupling box that throws the machine into gear. In a single revolution the pieces to be united are assembled and fastened to each other by a series of nails, varying in size according to circumstances, and brought under the hammer by vertical tubes.

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The Difference in Cost.

A correspondent of the *Farmers' Review* furnishes an estimate of the difference in cost between threshing and husking corn. Some of the figures given would hardly agree with those which a farmer in Michigan would accept as correct, but they will do to figure on by those who are discussing the merits of the two systems:

Threshing.—Two men on straw stacks; two men to measure; two men on the wagon to hand to feeder; two men in field to pitch on; three men on wagons and three teams to haul; one man and team to unload shelled corn; three regular threshers; two men to separate and tie shocks in two bundles; 14 men at \$1 per day, \$14; seven teams at \$1 per day, \$7; board of teams \$1.65; meal to threshers at nine cents, \$3.33. Total \$26.08.

Husking in Shock.—Four hundred shocks of 64 hills at four cents, \$16; two men to stack bound fodder, one pitcher at stack, one fielder, two to draw, at \$1, \$6; two teams and three wagons, at \$1, \$2; board of two teams one day, \$2; delivery corn to crib at rate of 150 bushels per day, cost for 400 bu., \$4.32; board of team and man while delivering 2% days, \$1.38; total, \$31.64. Cost per bushel threshing 6% plus 3%—10¢; cost per husking in shock, seven and nine-tenths cents; difference in favor husking per bushels two and three-tenths cents.

You may urge that it is worth two cents per bushel to shell the corn. I think not, when allowance is made for the value of the cobs for feed.

Veterinary Department

Conducted by Prof. Robert Jennings, Veterinary Surgeon. Professional advice through the columns of the Michigan Farmer to all regular subscribers free. The full name and address will be necessary that we may identify them as subscribers. The symptoms of disease will be described in such manner as to admit of a correct diagnosis. No questions answered personally by mail unless accompanied by a fee of one dollar. Private address, No. 201 First St., Detroit, Mich.

Porridge in Yearling Colts.

Veterinary Editor of the Michigan Farmer.
I have two last spring's colts, other dark brown in color, one a horse, the other a mare, which have a breaking out. I first noticed it on the horse on one of his front ankles. The hair comes off as (you will see by the enclosed sample) and leaves the skin bare but not sore, and in a few days the hair starts to grow. They have several small patches on their bodies, from inch to two inches across, and not confined to any particular part; the hair don't come off unless plucked, they don't seem to try to rub; they are in good flesh and are fed hay and oats, and run to the straw-stack forenoon when it is pleasant, the rest of the time run in a good warm shed with an earth floor. My young cattle in another yard at a distance from them have trouble a little similar, the hair coming off their legs and leaving the skin in patches rough and bleeding. GRANGER.

Answer.—Our subscribers when writing to us for advice would find it to their interest to take a little more time in carefully describing symptoms, no matter how trifling they may appear. The most trifling symptom, so often overlooked, is the key which opens the way to a correct diagnosis. Without the specimen of hair, our answer in this case would have been "no diagnosis." This specimen beautifully illustrates the true character of the disease, functional derangement of the capillary system. Treatment: Select a warm day or a comfortable place for the purpose. Then with a soft brush scrub all diseased parts with warm water and sulphur soap, removing all scurfy matter, after which apply the following with a piece of soft sponge to all denuded parts. Sulphate zinc, two ounces; glycerine, four ounces; soft water, eight ounces; mix, and use twice a day. Give internally the following: Hyposulphite soda, one pound; dissolve in one quart of soft water. Dose, one ounce night and morning. Feed moderately, avoiding corn or anything heating to the blood.

Chronic Bronchitis, with Complications.

EATON RAPIDS, Dec. 14, 1887.
Veterinary Editor of the Michigan Farmer.
I have a gelding four years old that was taken with a cough about three weeks ago; each cough as they have with the horse d. stammer, comes in paroxysms, after a fit, driving him to the stable and exercising. He seems to be catching him like a horse with a slight attack of colic; he lets go, and by about half way between the hind and hindward the swelling of the swelling of the man's hand; since eating properly, in good spirits and kidney, drinking well, hair looks all right, and Monday I noticed his limbs right the hind ones more than the were swollen; the next morning they were forward ones; so much so that it was very much worse; so walk; no other swelling difficult for him to walk; he lets go, and by about half way between the hind and hindward the swelling of the swelling of the man's hand; since eating grain as much water as usual; does not require 'em well what to do for him or whether he can be cured?

SUBSCRIBER.

Answer.—From the above description of the symptoms of your colt we cannot satisfy the symptoms of your colt we. The first symptom indicating the approach of indument, properly treated, would have been the complications now existing. Under the circumstances, the animal having so long neglected, there is no longer time to advise with the case; we therefore would advise you to lose no time in securing the personal advice of a veterinary surgeon, who, with the animal before him, would prescribe understandingly. The chances are that it is too late to make a radical cure of the disease.

Abscess or Fistula in Throat of Calf.

FOXBORO, Dec. 12, 1887.
Veterinary Editor of the Michigan Farmer.
I have a standard bred horse colt, coming three years old, bright bay in color; had distemper last July, and swelled badly under the jaws, which I poulticed with liniment and opened; discharged freely, but the swelling never entirely disappeared. The bunch is about the size of a hen's egg; some time ago cut out a patch of caustic in it, but derived no benefit; it continues to discharge the colt does well and seems to do well. Would you kindly tell me what to do for him?

SUBSCRIBER.

Answer.—There evidently has been some mismanagement in the treatment of the colt, which if let alone would have passed

along in nature's course. When trouble arises in such cases, it is better to call the aid of a competent veterinary surgeon. The chances are the abscess was opened too early, or the action of the caustic used may have caused the formation of a fistula between the right and left branches of the under jaw bones. If so the services of a veterinary surgeon should at once be called to examine and prescribe for it. If there are none in the neighborhood, inject the following in the sinus or opening, using a glass syringe for the purposes. Glycerine, one ounce; carbolic acid, one drachm; soft water, four ounces. Mix all together, and use three times a week, first cleaning the wound well with tepid water. If there is no change for the better in two weeks an operation will probably be necessary. Give no corn or cornmeal, and but little hay.

An association has been formed in Detroit under the name of the Eastern Poultry and Pet Stock Association. They are getting out a premium list for first exhibition Feb. 15 to 18 at Detroit.

Catarrh Cured.

A clergyman, after years of suffering from that loathsome disease, Catarrh, and vainly trying every known remedy, at last found a prescription which completely cured and saved him from death. Any sufferer from this dreadful disease sending a self addressed stamped envelope to Prof. J. A. Lawrence, 212 East 9th St., New York, will receive the recipe free of charge.

Commercial.

DETROIT WHOLESALE MARKET.

DETROIT, December 24, 1887.

FLOWER.—Quotations dropped about one per cent. The market is quiet and steady. Quotations are as follows:

MICHIGAN ROLLING PROCESS. 3 65 2 90
Michigan patent 4 25 2 60
Minn. state, bakers 4 15 2 45
Minn. state, patent 3 25 2 80
Rye 2 35 2 00
Low grades 2 35 2 00

WHEAT.—Market has ruled steady all week, with the tendency upward and a slight gain in values. At the close on Friday it was a fraction lower than the day before, but higher than last week on all grades. Closing prices at Saturday were as follows:

SPOT.—No. 1 white 86 4/4c; No. 2 red 86 4/4c; Future—No. 3 red, May, 91 1/4c.

CORN.—Market closed dull but firmer. No. 2 is quoted at 55 4/4c per bu., and No. 3 at 53c.

OATS.—Very firm at a sharp advance. No. 2 white sold at 37c, and No. 2 mixed are quoted at 34 1/4c per bu. Stocks and receipts light.

BARLEY.—Market showing signs of improvement. No. 2 is selling at 50 1/2c per cental, and No. 3 at 51 1/2c.

FEED.—By the car-load \$19 1/2c ton is quoted for bran. Middlings quoted at \$19 22 1/2c ton.

CLOVER SEED.—The market is firmer at a slight advance. Prime spot is selling at 84 1/2c January at \$1 12 1/2c, and February at \$1 20. No. 2 is quoted at \$3 82.

BUTTER.—The market holds very steady. Good to choice dairy is quoted at 18 1/2c per lb., and extra selections at 22 1/2c per lb. Medium table grades sell at 16 1/2c per lb. Creamery is firm at 22 1/2c per lb.

CHEDDAR.—Market quiet but prices are steady at 12 1/2c per lb. for Michigan full creams; Ohio, 10 1/2c per lb.; New York, 12 1/2c per lb.; skins, 9 1/2c per lb. for choice.

EGGS.—Fresh command 182 20c per doz., and cold storage 19c. Limed, dull at 17c.

FOREIGN FRUIT.—Lemons, Messinas, 20 boxes, \$4 00c 50; oranges, Floridas, 20 boxes, \$2 25c 50; cocomanuts, 20 boxes, \$0 00c 50; Ripe.

CHERRIES.—Market quiet but prices are steady at 12 1/2c per lb. for Michigan full creams;

Ohio, 10 1/2c per lb.; New York, 12 1/2c per lb.; skins, 9 1/2c per lb. for choice.

BEESWAX.—Steady at 25 20c per lb., as to quality.

HONEY.—In fair inquiry and quoted at 18 1/2c for choice comb and 11 1/2c for extracted.

BEANS.—Market firm and higher. City picked mediums, in car lots, are quoted at \$2 17 1/2c per bu., and \$2 24 1/2c in small lots from store. Unpicked quoted at 75c \$1 65 50.

DRIED APPLES.—Market quiet at 50 1/2c per cental, and 9 1/2c for evaporated. Demand moderate.

SALT.—Michigan, 80c per bbl.; car lots; 80c; dairy, \$2 10 per bbl.; Ashton quarter sacks, 72c.

BALED HAY AND STRAW.—Timothy in car lots is quoted as follows, \$ per ton: Prime No. 1, \$11; No. 2, \$10; No. 3, \$9 65 50; mixed, \$9 5t 10; clover, \$7 28. Straw, \$6 50.

POTATOES.—Quoted for 20c per lb. for store lots, and 15c per lb. on truck. Market firm.

ONIONS.—In fair demand at \$2 25c per lb. Stocks are only moderate.

POP CORN.—Quoted at 22 1/2c per lb.

HIDES.—Green city, 62 1/2c per lb.; country 52 1/2c; coarse, 50c; green calf, 65 1/2c; saited, 60 1/2c; sheep-skins, 50c 25c; each, 25c; stars, 25c.

DAIRY.—Market quiet and steady at 25c per lb.

SHREWD.—Market quiet and steady at 25c per